Discussion on Metadata Usage

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Objective of Session

1. Understand how people (and machines?) use metadata
2. Distinguish among the types of metadata
3. Recognize user needs
4. Understand management needs

The end goal should be a best practices document that can be utilized by the federal agencies.

How Do You Use Metadata?

- To describe data
- To find data
- To understand data
- To help others understand your data
- To exchange between machines (web services)

ECHO-GCMD Collaboration

ECHO Data Providers

Collection level Metadata

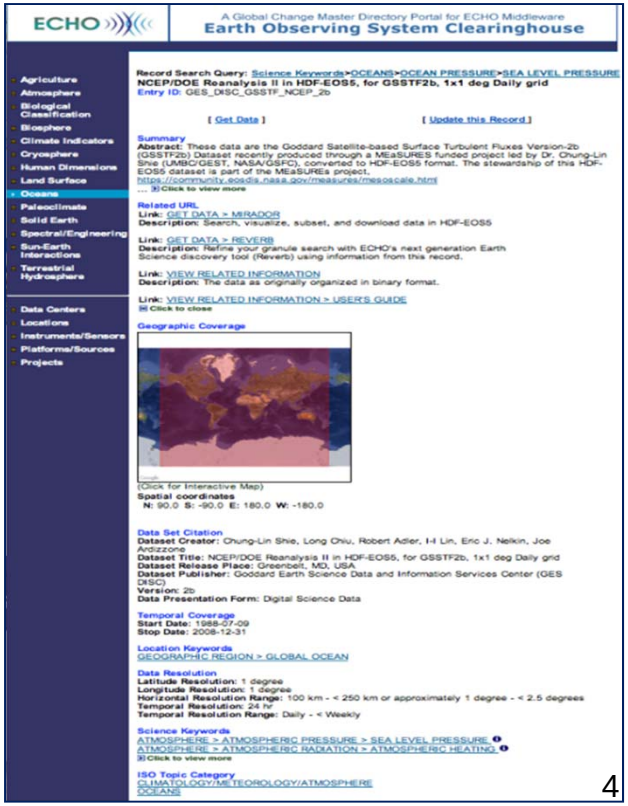
Including Entry_ID

ECHO

Call API to Retrieve Entry_ID list

GCMD

Update Portal



National Aeronautics and Space Administration
4

Distinguish Between the Types of Metadata

What are the Needs of a Metadata User?

- Discover data sets
- Have direct links to data
- Document data sets
- Have effective metadata authoring tools
- Others???

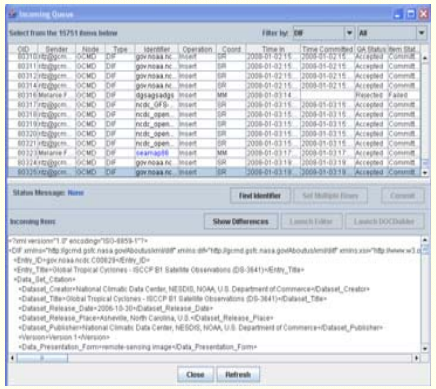
Metadata Submission/Lifecycle (docBUILDER)

Metadata Author

Validate and Submit

Write/Update Metadata

Import to Queue



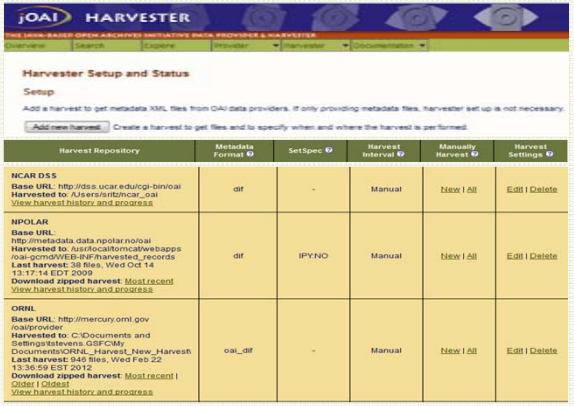
Retrieve from Database to Update

Review (QA/QC) Metadata

Load in Database

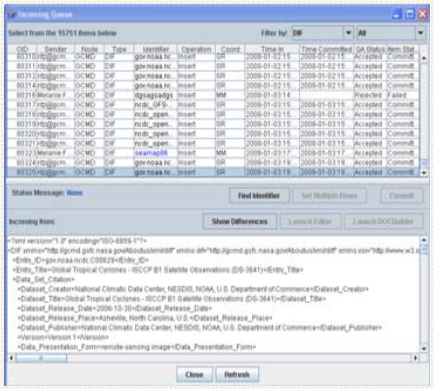
Science Coordinator

Metadata Submission/Lifecycle (Harvest)

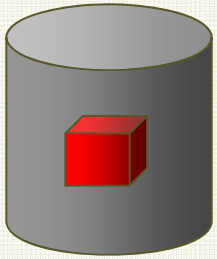


Harvest Metadata (FTP, OAI-PMH, WAF)

Import to Queue



Update



Load in Database

Review (QA/QC) Metadata

Science Coordinator

GCMD: DIF to ISO Translation

- Translation of collection level metadata is performed through an XSLT.

- Coded by Dave Connell (Australian Antarctic Data Centre) and Andy Townsend (Australian Antarctic Data Centre).

- http://data.aad.gov.au/aadc/metadata/difconvert/DIF-ISO.xsl

GCMD: DIF to ISO Translation

- GCMD DIF metadata extracted from the GCMD collection and translated to ISO-19115 daily.

- ISO metadata is indexed in the International Directory Network (IDN) Catalog Services for the Web (CS-W) server.

GCMD: IDN CSW Server

- Runs GeoNetwork CS-W open-source Catalogue.
- Follows the OGC OpenGIS Catalogue Services Specification.

GCMD: CSW URLs

- Production:
  - http://gcmdsrv1.gsfc.nasa.gov:8080/geonetwork/srv/en/main.home
- Failover:
  - http://gcmdsrv2.gsfc.nasa.gov:8080/geonetwork/srv/en/main.home
- Testing:
  - http://gcmdsrv3.gsfc.nasa.gov:8080/geonetwork/srv/en/main.home

GCMD: CSW Partners

- GEOSS/CI - Global Earth Observation System of Systems Common Infrastructure

- CEOS/CWIC - Committee on Earth Observation Satellites WGISS Integrated Catalog

- EURO-GEOSS - European approach to GEOSS

- Climate.gov - NOAA Climate Services Climate.gov (New Partner)

How will the GCMD Support ISO?

Option1:
Replace the DIF with ISO in the GCMD system.

Recognized by NASA's Standards Processing Group as a NASA standard.

Used by scientists and data centers worldwide.

Plain-language fields make it more likely scientists will document their data.

How will the GCMD Support ISO?

Option2:
Implement a DIF-ISO Profile

Scientists can continue to document their data using the core DIF fields with the option to populate ISO fields not available in the DIF.

ISO metadata can be imported and exported from the GCMD without loss of information.

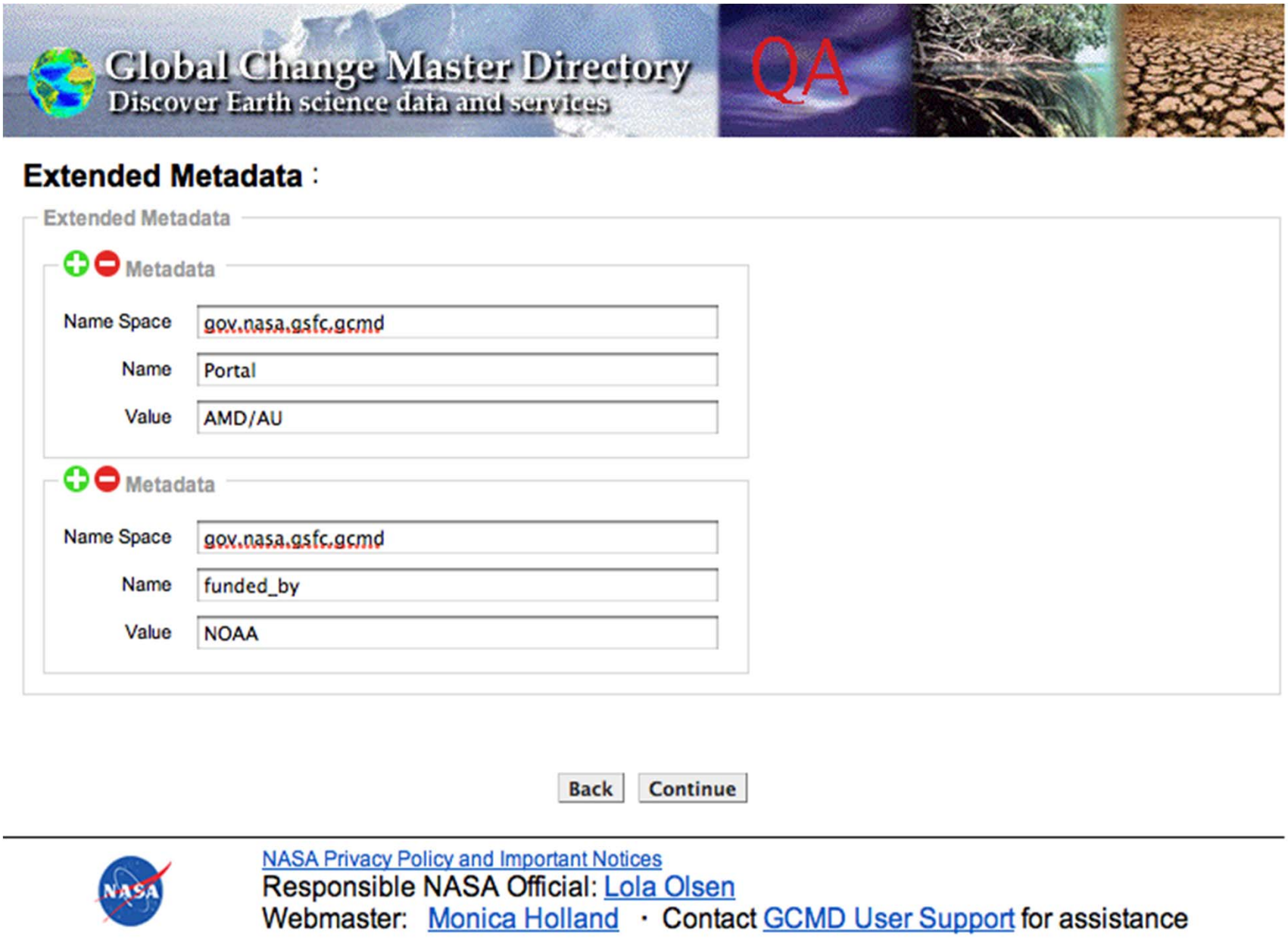
GCMD “key-value-pair” feature will permit users to imbed fields not offered by the DIF or ISO.

DIF-ISO Profile Example

Example of the DIF/Related URL field in DIF-ISO Profile

```
<gmd:onLine>
  <gmd:CI_OnlineResource>
    <gmd:linkage>
      <gmd:URL>http://edcsns17.cr.usgs.gov/EarthExplorer/</gmd:URL>
    </gmd:linkage>
    <gmd:protocol>
      <gco:CharacterString>WWW:LINK-1.0-http--link</gco:CharacterString>
    </gmd:protocol>
    <gmd:name>
      <gco:CharacterString>GET DATA</gco:CharacterString>
    </gmd:name>
    <gmd:description>
      <gco:CharacterString>
        Query and order satellite images, aerial photographs, and cartographic products
        through the U.S. Geological Survey. Log in as a guest or as a registered user.
        Registered users have access to more features than guests do. If you plan on using
        EarthExplorer frequently, you may wish to register. Please note that this site uses
        Session Cookies and Java applets.
      </gco:CharacterString>
    </gmd:description>
  </gmd:CI_OnlineResource>
</gmd:onLine>
```

Key-Value-Pair Example



What Are the Metadata Needs of Management?

- Metadata interoperability among agencies
- Contribution mandates
  - Data.gov, GEOSS, GCMD, ECHO, Mercury
- Funding metadata activities